

Bulletin of the American Ceramic Society

*A Monthly Publication Devoted to Proceedings of
the Society, Discussion of Plant Problems,
Discussions of Technical, Scientific,
and Art Questions, and Promotion
of Coöperative Research*

VOLUME 12, 1933

January-June

Edited by the Secretary of the SOCIETY, ROSS C. PURDY

Assisted by { EMILY C. VAN SCHOICK
MARY J. RADCLIFFE

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ease of the world. This marvelous opportunity offered to a group of men ordinarily self-effacing shall not be passed without adequate recognition. Man owes an incalculable debt to the engineer, the recognition of which will serve to dignify and sustain the position of the profession and implant in the minds of men some idea of his service to humanity. This day will indeed signify that the engineer is the mainspring of human progress gladly serving his fellow men and ever ready to heed the call to new and better things.

NATIONAL CONFERENCE ON CONSTRUCTION REPORT¹

The National Conference on Construction was concluded Friday, October 14, 1932. About 150 members were present on Thursday and 65 or 70 on Friday. The sessions of the Conference were held in the Conference Room of the new Department of Commerce Building. Messrs. Barnes and Chapman alternated as Chairman of the meeting and both made splendid talks on the aims and objects of the Conference.

Those who were present and those who read the reports will surely have a much better understanding of the difficulties which confront the so-called construction industry (Col. Chevalier remarked that there is no such thing as a construction industry, but that construction is carried on by a number of related industries having a common objective and a common interest).

From remarks and talks made, I feel assured that the policy of the Home Loan Banks will favor new construction, relief from foreclosures, and will not be used for thawing out old financial ice that some of the institutions have had in storage for years representing simply bad judgment.

The Conference is to constitute a Committee for continuing the work of the Conference. This Committee is to report to the United States Chamber of Commerce. Note that "the internal problems of the construction industry are within the sphere of the construction league and that study of the internal or inter-industry problems can be best coordinated by the Chamber of Commerce."

Something tangible and valuable may result from this Conference, but if it does, I think it will be due to knowledge gained by those who were present or who read the reports and translate that knowledge into effective action. I was particularly impressed by the caliber of the speakers at this Conference, their sincerity of purpose to accomplish something for the benefit and welfare of the construction industry as a whole, and by the particular lack of what might be termed selfish motives. At no point during the Conference did any occasion arise that made it seem necessary to defend any special interest or materials. The problem was viewed as one of the whole.

O. W. RENKERT, *Representative,
Paving Brick Specification*

NEWS FROM THE LOCAL SECTIONS

Pittsburgh Section

The members of the Pittsburgh Section met on December 13, 1932, at Mellon Institute. The address of the evening was presented by F. A. Harvey, Harbison-Walker Refractories Company, on "Recent Developments in Refractories." Dr. Harvey had a number of samples with which to illustrate his talk. He described the general plan of attack used by his company in going about a research problem and followed with several examples. The principal part of the talk dealt with the effect of screen size on the shrinkage of fire brick.

The following officers were elected: *Chairman*, H. H. Blau, *Vice-Chairman*, Harold E. White, *Secretary*, Raymond E. Birch, and *Treasurer*, Jack H. Waggoner.

¹ Excerpts from letter to E. P. Poste, President of the AMERICAN CERAMIC SOCIETY, October 17, 1932.

Baltimore-Washington Section

On December 3, 1932, the members of the Baltimore-Washington Section met at the Tilden Gardens Club Building, Washington, D. C. G. E. F. Lundell, chief of the Standard Sample Section, Bureau of Standards, gave an illustrated talk on "The Accuracy of Analyses of Certain Ceramic Materials." This lecture was based on the results that have been reported in the analysis of Bureau of Standards standard samples.

F. C. Kracek, Geophysical Laboratory, Carnegie Institution, Washington, D. C., talked on "The Equilibrium Phase Relations in the Alkali Silicate Systems." The melting-point relations in the above systems were discussed as well as the problems connected with establishing the nature of stable crystalline phases and the bearing of these results on the stability of glasses.

NEW MEMBERS RECEIVED IN NOVEMBER

CORPORATION

The Bonnot Co., B. T. Bonnot (voter), Canton, Ohio.

PERSONAL

W. C. Denison, Jr., President, Denison Engineering Co., Delaware, Ohio.
Otakar Kallauner, Rybkova Street 6, Brno, Czechoslovakia; Director of the State Institute for Silicate Research and Professor at the Polytechnical High School.
Alys Roysner Young, Stoneacre, Robinwood Lane, Gates Mills, Ohio; Instructor, Cleveland School of Art.

STUDENT

Owen J. Reynolds, New York State College of Ceramics, Alfred, N. Y.

Membership Workers' Record

Corporation		Personal		Student		Total
Office			Office			
1	Mrs. A. R. Dyer	1	1			5
	Office	2				

ROSTER CHANGES FOR OCTOBER AND NOVEMBER

PERSONAL*

Anderson, Thomas B., Crown Potteries, Evansville, Ind. (218 N. Ninth St., Cambridge, Ohio.)
Arnold, R. E., 113 W. 16th St., Dover, Ohio. (East Akron, Ohio.)
Bellamy, Harry T., 920 S. Olive, Mexico, Mo. (Belvidere, Ill.)
Callahan, H. D., 981 Franklin Ave., Columbus, Ohio. (27 N. Newstead, St. Louis, Mo.)
Campbell, Robert M., 726 Crown St., Morrisville, Pa. (445 Parkway Ave., Trenton, N. J.)
Cohn, Willi M., 1522 Henry St., Alton, Ill. (168 Lexington Ave., Cambridge, Mass.)
Copp, Warren F., Wheeling Steel Corp., Portsmouth, Ohio. (Plant 2, Frigidaire Corp., Dayton, Ohio.)
Cowan, R. Guy, Onondaga Pottery Co., Syracuse, N. Y. (1499 Cohasset Ave., Cleveland, Ohio.)
Crawford, J. L., Walsh Refractories Co., 4428 North First St., St. Louis, Mo. (Laclede-Christy Clay Products Co., St. Louis, Mo.)
Falknor, Tom, Barry Court, 17 Calhoun St., Trenton, N. J. (387 Middlesex Ave., Metuchen, N. J.)
Fallon, Frank, 810 W. Springfield St., Urbana, Ill. (Stupakoff Laboratories, Inc., Pittsburgh, Pa.)

* The address within parentheses represents the old address.

Field, Norman L., Box 502, Sonora, Calif. (Gladding, McBean & Co., Auburn, Wash.)
 Frank, G. Harry, 5436 Ferdinand St., Chicago, Ill. (420 S. Austin Blvd., Oak Park, Ill.)
 Greaves-Walker, A. McKinley, Libbey-Owens-Ford Glass Co., Charleston, W. Va. (Toledo, Ohio.)
 Heck, Frank G., 317 Gardner Ave., Trenton, N. J. (Rutgers University, New Brunswick, N. J.)
 Hermann, Max, 239 Ocean Ave., Brooklyn, N. Y. (113 Louis St., New Brunswick, N. J.)
 Hoffman, C. A., 15 W. Fourth St., Chillicothe, Ohio. (310 W. Broad St., Columbus, Ohio.)
 Houser, Victor F., 6710 S. Gifford Ave., Bell, Calif. (3234 N. Griffin, Los Angeles, Calif.)
 Hunting, Everett C., Center St., Dunellen, N. J. (2417 Park Ave., Plainfield, N. J.)
 Irving, Donald R., Greenville, Calif. (Carquinez Hotel, Richmond, Calif.)
 Knowles, W. V., Titanium Alloy Mfg. Co., Niagara Falls, N. Y. (B. F. Keith Bldg., Cleveland, Ohio.)
 Landrum, R. D., Harshaw Chemical Co., 365 E. Illinois St., Chicago, Ill. (3394 Norwood Rd., Shaker Heights, Cleveland, Ohio.)
 Lawson, George G., 1515 Versailles Ave., Alameda, Calif. (522 Landfair, Los Angeles, Calif.)
 Longenecker, H. L., N. J. Clay Products Co., Inc., South River, N. J. (622 W. South St., Raleigh, N. C.)
 McKeown, Thomas H., Roessler & Hasslacher Chemical Co., Empire State Bldg., New York, N. Y. (Perth Amboy, N. J.)
 Musselman, John E., R. R. 2, Clyde, Ohio. (1308 Main St., Elwood, Ind.)
 Neff, John M., 45 W. Star Ave., Columbus, Ohio. (54 Augustine St., Rochester, N. Y.)
 Powell, William R., Rolla, Mo. (604 S. Clark St., Mexico, Mo.)
 Rossell, H. A., 1710 Byers Ave., Joplin, Mo. (Christmas Copper Co., Christmas, Ariz.)
 Salisbury, Frank W., 943 N. Lincoln Ave., Pittsburgh, Pa. (Marietta Mfg. Co., Indianapolis, Ind.)
 Shands, Everett H., Detroit Vapor Stove Co., 12345 Kercheval St., Detroit, Mich. (Porcelain Enamel & Mfg. Co., Baltimore, Md.)
 Spurrier, Harry, Defiance Spark Plugs, Inc., Toledo, Ohio. (609 Webb Ave., Detroit, Mich.)
 Suter, Walter P., 21 Kenmare Rd., Larchmont, N. Y. (American Encaustic Tiling Co., 16 E. 41st St., New York, N. Y.)
 Tait, Leonard G., Caughey Apt. 505, 2325 E. Grand Blvd., Detroit, Mich. (B. Liverpool, Ohio.)
 Wagner, Bruce P., 103 Irving Terrace, Kenmore, N. Y. (1225 Sylvan's Rd., Cleveland, Ohio.)
 Whittenberg, R. E., Waterman Brick & Tile Co., Waskom, Texas. (B. Mifflin Hood Brick Co., Daisy, Tenn.)

NECROLOGY

L. Edson Jeffery

The members of this Society have learned with regret and sorrow of the passing of L. Edson Jeffery, son of Dr. and Mrs. J. A. Jeffery, of Detroit, Mich. Mr. Jeffery was responsible for the development of most of the major improvements on the Dressler tunnel kilns at the Champion Porcelain Company, and was in entire charge of the operation of these kilns for many years. He was also responsible for many other mechanical improvements and developments and his loss is being felt keenly by his entire organization, and particularly his father who relied on his judgment in many ways.

Mr. Jeffery was born in San Francisco on September 10, 1896. He was employed with the Champion Porcelain Company ever since he completed his education. As a boy and whenever time was available during summer months he was in close touch with the plant and familiar with the processes. During the war he was in an Officer's Training School at Fort Zacharias Taylor and was within a few days of receiving his Captain's Commission in the Artillery when the Armistice was declared.

He was an active member of the AMERICAN CERAMIC SOCIETY, having joined in 1922. Besides his parents he is survived by his wife, a young son, and a sister.

Walter A. King

The American Ceramic Society has received word of the loss of Walter A. King, superintendent of enameling at the Plyria plant of the Pfau & Company of Rochester, New York. Mr. King died of pneumonia on December 8, 1932. His association with the Pfau & Company dates back to 1917 when he began his career as a laboratory assistant. With the exception of a year and a half during the World War, when he served overseas, he has been with this company continuously. In 1925 he was made superintendent of enameling and in this capacity he introduced enameling practices which contributed to the expansion of enamel-lined equipment in many process fields.

Mr. King had been affiliated with the American Ceramic Society since 1925 and his genial personality and ability will be sorely missed in the Society as well as in the enamel industry.

NOTES AND NEWS

CERAMIC SCHOOL NOTES

Another University Ceramic Department

Adolph Kuechler has been appointed to the faculty of the Montana School of Mines at Butte, Montana. Mr. Kuechler is instructor in the ceramic courses which are being given for the first time at the Montana technical college. He is also conducting research work on the clay resources of Montana. He has a Bachelor's degree in Ceramic Engineering from The Ohio State University and Master of Science degree from the Missouri School of Mines.

"With his wide background of seven years' experience in ceramic engineering practice, Mr. Kuechler is eminently fitted for his position," President Francis A. Thomson reports. His experience ranges from plant operation to consulting practice. He comes to Butte from Dickinson, North Dakota, where he was superintendent of the Dickinson Fire and Pressed Brick Company.

Mr. Kuechler is a member of the AMERICAN CERAMIC SOCIETY and is a member of the abstracting staff for *Ceramic Abstracts*.

Publications and Researches by Mr. Kuechler are as follows:

- (1) "Influence of Fe_2O_3 and TiO_2 on Pure Clays," a thesis presented in partial fulfillment for degree of B. Cer. E. at Ohio State University, June, 1924.
- (2) "The Properties of the Fire Clays Used for the Manufacture of Zinc Retorts," a thesis presented in partial fulfillment for the degree of M. S. at the Missouri School of Mines, June, 1925.
- (3) "Influence of Fe_2O_3 and TiO_2 on Pure Clays," *Jour. Amer. Ceram. Soc.*, 9, 104-109 (1926).
- (4) "The Properties of Refractories in the Metallurgy of Zinc," *ibid.*, 10, 109-3 (1927).
- (5) "Some Notes on the Effect of Reclaimed Retort Material and Zinc Oxide upon the Physical Properties of Retort Mixtures," *Bull. Amer. Zinc Inst.* (April, 1927).
- (6) "A New Mercury Volumeter," *Jour. Amer. Ceram. Soc.*, 10, 807-12 (1927).
- (7) "The Properties of Refractories in Zinc Metallurgy," *† Missouri School Mines and Met., Bull.*, Vol. 10, No. 2, 139 pp., illustrated. (Feb., 1927.)



ADOLPH KUECHLER

New York State College of Ceramics

The New York State College of Ceramics at Alfred, New York, opened for fall 1932-33 with a 41.8% increase in enrollment. The freshman class numbers 13 in engineering and 45 in applied art, making a total for the four classes in the Ceram

* Co-author with E. S. Wheeler.

† Co-author with E. S. Wheeler and H. M. Lawrence.

NEW MEMBERS RECEIVED IN DECEMBER, 1932, AND JANUARY, 1933

PERSONAL

Alfred Earl Badger, Research Assistant, Department of Ceramic Engineering, University of Illinois, Urbana, Ill.
 John Hugh Chesters, University Club, Urbana, Ill.; Research in Ceramics, Commonwealth Fund Fellowship.
 Frank G. Gibson, 211 Ralph Ct. N. W., Canton, Ohio.
 Günter Hammen, Gövlitzstr. 11, Bunzlau, Germany.
 John D. Morton, 1415 Parker Ave., Detroit, Mich.; Manager, Motor Products Development, U. S. Rubber Co.
 Ernest Horace Nichols, Chief Engineer, Funkhouser Co., Hagerstown, Md.
 Caleb Parkinson, "Ashdale," Holmsfield, Yorks, Halifax, England; Manager and Secretary, Messrs. Parkinson & Spencer, Ltd.
 Oscar N. Shaffer, 321 Argonne Drive, New Kensington, Pa.; National Lead & Oil Co.
 Leo Shartsis, 1412 Chapin St. N. W., Washington, D. C.; Bureau of Standards.
 Nelson Woodsworth Taylor, Professor of Ceramics, Pennsylvania State College, State College, Pa.
 Joseph Palin Thorley, Parkway, East Liverpool, Ohio; Art Director, Taylor, Smith & Taylor Co., Chester, W. Va.

STUDENT

Wendell P. Keith University of Illinois, Urbana, Ill.
 Joseph A. Pask Missouri School of Mines and Metallurgy, Rolla, Mo.
 Felix Fraulini Charles Richard Rosenbaum Ohio State University, Columbus, Ohio
 Andrew Malinosky, Jr. Griffin E. Terry

Membership Workers' Record

PERSONAL		STUDENT	
A. I. Andrews	1	C. M. Dodd	2
W. N. Harrison	1	C. W. Parmelee	2
C. A. Nicely	1	Office	2
C. W. Parmelee	2		
Fred Saureisen	1	Total	6
Clement Saxton	1	Grand Total	17
W. F. Steger	1		
Office	3		
Total	11		

ROSTER CHANGES IN DECEMBER, 1932, AND JANUARY, 1933

PERSONAL*

Barger, H. D., Wellsville Fire Brick Co., 1611 E. Erie Ave., Lorain, Ohio. (14702 Superior Rd., Heights Branch, Cleveland, Ohio.)
 Berkey, Paul L., 901 Edgewood Ave., Trenton, N. J. (440 S. Atlantic Ave., Pittsburgh, Pa.)
 Brown, A. R., 169 Read Ave., Crestwood, N. J. (Ritz Hotel, Pittsburgh, Pa.)
 Campbell, Robert M., Trenton Pottery Co., 726 Crown St., Morrisville, Pa. (445 Parkway Ave., Trenton, N. J.)
 Cohn, Willi M., 1672 Oxford St., Berkeley, Calif. (1522 Henry St., Alton, Ill.)
 Green, Robert S., 1105 S. Jefferson St., Mexico, Mo. (Rolla, Mo.)
 Hansard, W. C., 32 Huntingdon Road, Atlanta, Ga. (2 S. Clinton Ave., Trenton, N. J.)
 Hasslacher, G. F., Short Hills, N. J. (24 Gramercy Park, New York, N. Y.)
 Heffelfinger, G. W., 348 Fleetwood, Coatsville, Pa. (3336 Berea Rd., Cleveland, Ohio.)

* The address within parentheses represents the old address.

Hellmers, Henry T., 417 Sarlen Ave., Clarksburg, W. Va. (909 Beatty Ave., Cambridge, Ohio.)
 Hoffman, C. A., British Ceramic Service Co., Ltd., 121 W. George St., Glasgow C-2, Scotland. (15 W. 4th St., Chillicothe, Ohio.)
 Keller, W. D., 201 Swallow Hall, University of Missouri, Columbia, Mo. (13 Conant Hall, Cambridge, Mass.)
 Kriegel, W. Wurth, Gladding, McBean & Co., Renton, Wash. (15235 Wallingford Ave., Seattle, Wash.)
 Longenecker, H. L., Wilson, N. C. (N. J. Clay Products Co., Inc., South River, N. J.)
 McDowell, Samuel J., A C Spark Plug Co., Flint, Mich. (175 W. Main St., Newark, Ohio.)
 Munshaw, L. M., Crystal Lake, Ill. (Haeger Potteries, Inc., Dundee, Ill.)
 Noble, William N., 104 W. Illinois St., Urbana, Ill. (Chicago Vitreous Enameling Co., 1407 S. 55th Court, Cicero, Ill.)
 Plank, Ross D., 4135 La Salle Ave., Culver City, Calif. (220 I St. S. E., Auburn, Wash.)
 Rugh, E. W., Rolivar, Pa. (431 Winter Ave., New Castle, Pa.)
 Shardlow, L. Russel, 112 Sunset Ave., Verona, N. J. (204 Ceramics Bldg., Univ. of Illinois, Urbana, Ill.)
 Sladek, G. E., U. S. Quarry Tile Co., Parkersburg, W. Va. (U. S. Encaustic Tile Works, Indianapolis, Ind.)
 Spires, Stephen T., 103 Jacoby St., Norristown, Pa. (Lavino Refractories Co., Womelsdorf, Pa.)
 Stegmayer, Charles, New City, N. Y. (West Ave., Sewaren, N. J.)
 Stowe, G. T., E. J. Lavino Co., 1844 Oliver Bldg., Pittsburgh, Pa. (Bullitt Bldg., Philadelphia, Pa.)
 Williams, Francis J., Mineral Industries Bldg., State College, Pa. (69 N. Bryant Ave., Bellevue, Pa.)

NECROLOGY

F. W. Rogers*

"After a long period of illness Frederick White Rogers passed away quietly at his home. He was sixty-six years old. Born at Quincy, Illinois, on September 7, 1866, he spent his early years and youth in that city, where his father, Hiram Rogers, carried on a drug business. After the death of his father, his mother and his uncle conducted a hardware business, where Mr. Rogers made his first acquaintance with the stove and range business. In early manhood he went to Albany, New York, where he learned in detail this line of production in his uncle's stove company. He worked in the factory, then as salesman for the company. Later he was salesman, particularly through the northwest, for the Garland Stove Company and then for the Detroit Jewel Company. In 1902 Mr. Rogers became associated with the newly-formed Malleable Iron Range Company of Beaver Dam, Wisconsin.

"For thirty years his work has been with this company. Since 1921 he has been president of the organization. He has seen the plant grow from one small frame building to a large manufacturing enterprise occupying fourteen acres of floor space, with a capital investment of two million dollars, and with a trade that extends to every continent and to every state of our union.

"As was natural, his primary interest in these thirty years has been in the Range Company. He has drawn into the organization a staunch and capable group of co-workers. Every department has been made effective in itself but, over them all, coordinating, giving strength and unity, have been the personality and genius of Mr. Rogers. New inventions and patents, extension of output from coal and wood ranges to include gas and electric ranges, the addition of water heaters and refrigerators to the line of products have come largely from his active, clear-thinking mind. Not a detail of the business in any department escaped his attention and understanding.

"But this organization has been more than a commercial and industrial plant. Its primary interest has been its personnel, not profit. Mr. Rogers has known intimately every worker in the plant.

"Next to his devotion to his industrial enterprise, Mr. Rogers' highest interest was in doing good—good to an individual, good to the community. When the foundry of a

* Remarks by Edwin P. Brown at the funeral service, December 21, 1932.

The ladies are invited to attend the dinner and a special entertainment will be provided for them by the staff of the Carnegie Art Institute after the dinner.

The Section will be addressed by Dr. Taylor, whose subject will be "Chemical Reaction between Solids." In the work which he will discuss, the components were finely ground and pressed together under high pressures. After sintering from 20 to 24 hours at about 1000°C, the products were examined with X-rays by the powder method for the identification of new compounds. Reactions occurred between ZnO (or NiO) and SiO₂, TiO₂, and SnO₂, giving rise to structures like spinel, olivine, and ilmenite. Dr. Taylor will discuss the work of other investigators in this field, as well as the general mechanism of such solid phase reactions and the bearing of these processes on refractories.

NECROLOGY

Charles W. Crane

Word has been received of the death of Charles W. Crane in Elizabeth, N. J., after about a year's illness. He would have been eighty-one years old on April 19, 1933.

Mr. Crane was a descendant of Jasper Crane, one of the founders of the city of Newark. He was born in Elizabeth, N. J. At the age of sixteen he entered the shipping business in the employ of the late Elias D. Smith of Elizabeth. He organized the firm of Charles W. Crane and Company in 1895 and eight years later organized the Crossman and Company to dredge sand and mine clay in Sayreville, N. J. He was president and treasurer of the latter Company.



J. C. W. CRANE

Mr. Crane was vice-president of the New Jersey Manufacturers Casualty Insurance Company and a director of the Elizabethport Banking Company in Elizabeth. He served as chairman of the Board of Trustees of the Manufacturers Association of New Jersey, and for twenty-one years was president of the Union County Building and Loan Association of Elizabeth, N. J.

He was vice-president of the Union County Historical Society and a member of the Maritime Association of the Port of New York. From 1917 he held membership in the American Ceramic Society and was Councilor of the Ceramic Association of New Jersey, in which he was intensely interested. Through the latter Association he assisted the late Charles A. Bloomfield and others in establishing a Department of Ceramics at Rutgers University.

Mr. Crane was a member of the original board of directors of the Elizabeth Y. M. C. A. and for many years was superintendent of the Sunday School of the Grey-stone Presbyterian Church in Elizabeth.

Two daughters, Mrs. Mary C. Hahn of Elizabeth, and Mrs. Harriet C. Latham of New Britain, Conn., survive. Mr. Crane leaves a legion of friends in all walks of life to mourn his passing.

Mr. Crane was a regular attendant at Meetings of the American Ceramic Society and of the Ceramic Association of New Jersey. Quiet, tolerant, broad in experience, and catholic in thought Mr. Crane endeared himself to all with whom he contacted.

NEW MEMBERS RECEIVED IN MARCH

PERSONAL

Helen Blair Bartlett, Petrographer, A C Spark Plug Co., Flint, Mich.
Chadwick N. Heath, 99 Chauncy St., Boston, Mass.; National Fireproofing Corp.
Walther Kurz, 309 S. Main St., Abingdon, Ill.; Chemist, Abingdon Sanitary Mfg. Co.

Alexis Pincus, 44 Suydam St., New Brunswick, N. J.; Rutgers University.
George R. Sylvester, Allied Engineering Co., 87 W. Main St., Columbus, Ohio.

STUDENT

Alfred William Beinlich, Jr., Missouri School of Mines and Metallurgy, Rolla, Mo.
Justus Jordan Beinlich, Missouri School of Mines and Metallurgy, Rolla, Mo.

Membership Workers' Record

PERSONAL		STUDENT	
R. F. Geller	1	C. M. Dodd	2
Alexander Silverman	1		-
H. F. Vieweg	1	Grand Total	7
Office	2		
	-		
Total	5		

ROSTER CHANGES IN FEBRUARY AND MARCH

PERSONAL*

Abney, Charles L., Columbus Brick & Tile Co., Jacksonville, Fla. (Doctors Inlet, Fla.)
Ally, Abde, Department of Glass Technology, Sheffield University, Sheffield, England. (University of Illinois, Urbana, Ill.)
Graetz, Robert S., 1547 Lee St., Charleston, W. Va. (306 Davis St., Clarksburg, W. Va.)
Hertzell, E. A., 4435 Highridge St., Pittsburgh, Pa. (Harbison-Walker Refractories Co., Chester, Pa.)
Hodgdon, Frank B., 3 Riverview Pl., Davenport, Iowa. (Massachusetts Institute of Technology, Cambridge, Mass.)
Irving, Donald R., Box 1157, Richmond, Calif. (Greenville, Calif.)
Johnson, Frederick H., Klondyke P. O., East Liverpool, Ohio. (Forester Ceramic Art & Specialty Co., Summitville, Ohio.)
Kent, N. Johnson, 701 Kensington Ave., Plainfield, N. J. (21 Marshall St., Caldwell, N. J.)
McKeown, Thomas H., Color Department, Roessler & Hasslacher Chemical Co., Perth Amboy, N. J. (New York, N. Y.)
Meeka, Edward, 4349 Holly Hills Blvd., St. Louis, Mo. (Eagle-Picher Lead Co., Joplin, Mo.)
New, Ryland H., National Sewer Pipe Co., Ltd., Swansea, Ontario, Canada. (Metropolitan Bldg., Toronto, Ont.)
Rapp, Carl H., 506 E. Witherbee St., Flint, Mich. (Milford, Ill.)
Richardson, Gordon B., 116 New Montgomery St., San Francisco, Calif. (Livermore, Calif.)
Schotts, Walter H., 215 Estudillo Ave., San Leandro, Calif. (55 W. Star Ave., Columbus, Ohio.)
Smith, Louis A., 1000 Franklin Ave., Aliquippa, Pa. (Woodlawn, Pa.)

GLASS DIVISION COLLABORATED

DIVISION OF INDUSTRIAL AND ENGINEERING CHEMISTRY, AMERICAN CHEMICAL SOCIETY

D. B. Keyes, *Division Chairman*, and E. M. Billings, *Secretary*

Symposium on "Glass": F. C. Flint, Program Chairman.

The following program was given by the Glass Division of the American Ceramic Society at the Washington Meeting of the American Chemical Society.

* The address within parentheses represents the old address.

66679

February 10, 1994

I hereby certify that the attached copies of the Bulletin of the American Ceramic Society, Volume 12, 1933, are true and accurate copies, the original of which is maintained in the normal course of business at the American Ceramic Society, 735 Ceramic Place, Westerville, Ohio 43081.

Christine Schnitzer

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THE BULLETIN

of the American Ceramic Society

*A Monthly Publication Devoted to Proceedings of
the Society, Discussions of Plant Problems,
Discussions of Technical, Scientific,
and Art Questions, and Promotion
of Coöperative Research*

Vol. 12, 1933

JULY-DECEMBER

Edited by the Secretary of the Society, ROSS C. PURDY

Assisted by { EMILY C. VAN SCHOICK
MARY J. RADCLIFFE

Assisted by the following officers of the Industrial Divisions:

L. E. BARRINGER	} Art	R. A. HEINDL	} Refractories
E. DEF. CURTIS		R. B. SOSMAN	
A. I. ANDREWS	} Enamel	J. O. EVERHART	} Structural Clay Products
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G. H. BROWN	} Materials and Equipment	LOUIS NAVIAS	} White Wares
C. H. PEDDRICK, JR.		R. F. GELLER	

Officers of the Society

JOHN C. HOSTETTER, *President*
Corning Glass Works, Corning, N. Y.

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NOTES AND NEWS

SILICOSIS

Racketeer lawyers and doctors have added to industrial hazards the liability of unwarranted financial losses, as though it were not bad enough to have the possibility of workmen contracting silicosis in spite of every possible warning and precaution.

Silicosis and all other lung troubles classified under the more general term "pneumoconiosis" have, no doubt, always afflicted those who were at all active in factories, in streets, or on farms. Science and science methods have disclosed these lung troubles. An accumulation of data and case histories has made more evident the causes and results. With increasing facilities and the acquisition of authentic scientifically exact observations there has been on the part of plant managers a growing sense of responsibility and the need for protective devices for their employees. As a reward for these humanitarian disclosures and efforts, the racketeering lawyers and doctors have seen the chance for making easy money.

It behooves every ceramic manufacturer to prepare a defense against silicosis damage suits. The plant must be as free from fine air floating dust as is possible and the men must be warned and provided with dust masks. But these precautions are not sufficient. The plant managers must be prepared to show medical and X-ray records.

As further evidence¹ of the seriousness with which the scientists have studied the matter of silicosis the following one hundred and thirty-five references are given from a report by H. K. Pancoast and E. P. Pendergrass.² Concerning these references the authors make the following statement:

The references we have been obliged to consult were very numerous. The literature during the past few years has been replete with articles dealing with the various phases of dust inhalation. We are obliged to restrict our list of references to those articles which present particular points of interest to the roentgenologist. We have been obliged to omit many of the references included in our previous presentations.

References

- E. ARNOULD. Is anthracosis a disease entity? *Presse méd.*, 37, 1624-26 (1929).
- C. BADHAM. Studies of Industrial Hygiene No. 13. Notes on a fine type of fibrous pneumoconiosis produced by silicates and other minerals. Extract from Rept. of Director-General of Public Health, New South Wales, for year ended Dec. 31, 1927.
- C. BADHAM, H. E. G. RAYNER, AND H. D. BROOSE. Studies in Industrial Hygiene No. 12. Dust sampling in Sydney sandstone industries. *Ibid.*
- J. B. BARRETO, P. DRINKER, J. L. FINN, AND R. M. THOMSON. Masks and respirators for protection against dusts and fumes. *Jour. Ind. Hyg.*, 9, 26-41 (1927).
- T. H. BELT. Pathology of silicosis of the lung. *Can. Pub. Health Jour.*, 20, 494-509 (1929).

¹ See Editorial on "The Silicosis Racket," *Bull. Amer. Ceram. Soc.*, 12 [5], 127-34 (1933).

² *Amer. Jour. Roentgenology and Radium Therapy*, Vol. XXVI, No. 4, October (1931).

J. J. BLOOMFIELD. Study of efficiency of dust-removal systems in granite-cutting plants. *Pub. Health Rept.*, 44, 2505-22 (1929).

M. G. BOHRD. Pulmonary siderosis; two cases with reticulo-endothelial siderosis. *Arch. Path.*, 10, 179-96 (1930).

G. C. BRINK AND A. R. RIDDELL. Personal communication.

H. M. CARLETON. Effects produced by inhalation of haematite and iron dusts in guinea pigs. *Jour. Hyg.*, 26, 227-34 (1927).

W. I. CLARK. Dust hazard in abrasive industry; second study. *Jour. Ind. Hyg.*, 11, 92-96 (1929).

E. H. CULVER. Progress and present status of industrial hygiene in the Union of S. Africa. *Ibid.*, 11, 194-215 (1929). International Silicosis Conference. *Jour. Med. Assn. S. Africa*, Sept., 1930.

E. L. COLLIS. Annual Report Chief Inspection of Factories and Work Shops for England and Wales, 1910. (Quoted by Simson.) Statistical characteristics of dust phthisis (pulmonary silicosis). *Jour. Ind. Hyg.*, 8, 457-65 (1926).

E. L. COLLIS AND J. C. GILCHRIST. Effects of dust upon coal trimmers. *Ibid.*, 10, 101-10 (1928).

E. L. COLLIS AND K. W. GOADBY. Dust inhalation and iron ore mining. *Ibid.*, 12, 266-80 (1930).

W. E. COOKE. Fibrosis of the lungs due to the inhalation of asbestos dust. *Brit. Med. Jour.*, 2, 147 (1924). Pulmonary asbestosis. *Ibid.*, 2, 1024-25 (1927). Asbestos dust and the curious bodies found in pulmonary asbestosis. *Ibid.*, 2, 578-80 (1929).

Correspondence. *Jour. Amer. Med. Assn.*, 95, 238 (1930).

S. L. CUMMINS. Effects of coal dust upon the silicotic lung. *Jour. Path. & Bact.*, 30, 615-19 (1927).

EDITORIAL. *Brit. Med. Jour.*, 2, 504 (1929).

L. EDLING. Contributions to roentgenology of pulmonary anthracosis. *Acta radiol.*, 6, 389-90 (1928).

J. EWING. Neoplastic Diseases. 2d ed. W. B. Saunders Co., Philadelphia and London, 1922, p. 808.

J. W. FARNEL. Study of silica dust in hard rock drilling in New York City. *Jour. Ind. Hyg.*, 11, 69-81 (1929).

B. M. FRIED. Origin of histiocytes (macrophages) in the lungs; an experimental study by use of intratracheal injections of vital stain. *Arch. Path. & Lab. Med.*, 3, 751-67 (1927).

L. U. GARDNER. Studies on relation of mineral dusts to tuberculosis. I. Relatively early lesions in experimental pneumoconiosis produced by granite inhalation and their influence on pulmonary tuberculosis. *Amer. Rev. Tuberc.*, 4, 734 (1920). Appendix on Pathological Studies. U. S. Pub. Health Bull., No. 187 (July, 1929). U. S. Govt. Printing Office, Washington, D. C. Studies on experimental pneumoconiosis. V. Reactivation of healing primary tubercles in the lung by inhalation of quartz, granite, and carborundum dusts. *Amer. Rev. Tuberc.*, 20, 333-75 (1929). Will inhalation of siliceous dusts activate a partially healed focus of tuberculous infection? Experimental study. *Pub. Health Rept.*, 45, 282-88 (1930).

S. R. GLOVNE. Presence of asbestos fiber in lesions of asbestos workers. *Tubercle*, 10, 404-407 (1929). Reaction of tissues to asbestos fiber, with reference to pulmonary asbestosis. *Ibid.*, 11, 151-53 (1930).

A. L. GRAY AND J. L. TABB. Pneumoconiosis; report of cases. *Va. Med. Month.*, 49, 847-49 (1923).

W. E. GYE AND E. H. KETTLE. Pathology of miners' phthisis. *Lancet*, 2, 855-56 (1922).

W. E. GYE AND W. J. PURDY. Poisonous properties of colloidal silica; effects of parenteral administration of large doses. *Brit. Jour. Expt. Path.*, 3, 76-85 (1922). Poisonous properties of colloidal silica; effects of repeated

- intravenous injections on rabbits; fibrosis of liver. *Ibid.*, 1, 86-94 (1922). Poisonous properties of colloidal silica. *Ibid.*, 5, 238-50 (1924).
- C. HADDOW. Clinical aspects of pulmonary asbestosis. *Brit. Med. Jour.*, 2, 580-81 (1929).
- A. HAMILTON. Enamelled sanitary ware manufacture. *Jour. Ind. Hyg.*, 11, 139-53 (1929).
- D. HARRINGTON AND A. J. LANZA. Miners' consumption in the mines of Butte, Mont. Preliminary report of an investigation made in 1916-1919. U. S. Bur. Mines *Tech. Paper*, No. 280 (1921).
- T. HATCH, P. DRINKER, AND S. P. CHOATE. Control of the silicosis hazard in the hard rock industries. I. A laboratory study of design of dust control systems for use with pneumatic granite cutting tools. *Jour. Ind. Hyg.*, 12, 75-91 (1930).
- P. S. HAY. Short description of a dust trap to be used in conjunction with percussive rock drills. *Ibid.*, 8, 496-98 (1926).
- E. R. HAYHURST, D. J. KINDER, B. E. NEISWANDER, AND C. D. BARRETT. Silicosis with low incidence of tuberculosis. *Ibid.*, 11, 228-44 (1929).
- P. HEFFERNAN. Notes on biophysics of silica and etiology of silicosis. *Brit. Med. Jour.*, 2, 489-92 (1929). Exposure to silica dust without the occurrence of silicosis. *Jour. Ind. Hyg.*, 8, 481-90 (1928).
- P. HEFFERNAN AND A. T. GREEN. Method of action of silica dust in the lungs. *Ibid.*, 10, 272-78 (1928).
- K. HENIUS AND O. RICHTER. Zur Frage der Einwirkung von Kohlenstaubinhaleation auf die Bindegewebsentwicklung in der Lunge. *Z. Tuberk.*, 46, 123-28 (1926); abstracted in *Jour. Amer. Med. Assn.*, 88, 287 (1927).
- E. HIGGINS, A. J. LANZA, F. B. LANEY, AND G. S. RICE. Siliceous dust in relation to pulmonary disease among miners in the Joplin District, Mo. U. S. Bur. Mines *Bull.*, No. 132 (1927).
- HOLST, D. KAPLUNOVA, AND M. SANTOTZKIJ. X-ray study of pneumoconiosis of porcelain workers. *Fortschr. Gebiete Röntgenstrahlen*, 37, 358-68 (1929).
- F. L. HOFFMAN. Mortality from respiratory disease in dusty trades. U. S. Dept. Labor, Bur. Labor Statistics, *Bull.*, June, 1918. (Quoted by Simson.) Compensation for silicosis. *Ind. Doctor*, 2, 103-106 (1924). Pneumoconiosis in the stone industry. *Amer. Rev. Tuberc.*, 6, 772-81 (1922). Problem of dust phthisis in the granite stone industry. U. S. Dept. Labor, Bur. Labor Statistics, *Bull.*, No. 293, 1922. (Quoted by Willis.)
- R. HOLLMAN. Über die Einwirkung von Kohlen- und Graphitstaub ohne Gesteinsbeimengung auf die Lunge. *Z. Tuberk.*, 52, 394-96 (1928).
- L. G. IRVING. Present position of miners' phthisis on the Rand. Abstracted in *Jour. Ind. Hyg.*, 11, 92 (1929).
- D. C. JARVIS. Roentgen study of dust inhalation in the granite industry. *Amer. Jour. Roentgenol.*, 8, 244-58 (1921). Dunham's fans in roentgen-ray study of granite dust inhalation. *Ibid.*, 8, 560-64 (1921). Conception of chest X-ray densities based on a study of granite dust inhalation. *Ibid.*, 9, 226-34 (1922). Clinical study of granite dust inhalation. 17th Annual Meeting, Nat. Tuberc. Assn., Trans., pp. 411-21 (1921). Upper respiratory tract in granite dust inhalation. *Ann. Otol., Rhinol., & Laryngol.*, 32, 405-12 (1923).
- S. H. KATZ, G. W. SMITH, AND E. G. MEITER. Dust respirators; their construction and filtering efficiency. *Bur. Mines Tech. Paper*, No. 394 (1926).
- E. H. KETTLER. Experimental silicosis. *Jour. Ind. Hyg.*, 8, 491-95 (1926).
- D. J. KINDER AND E. R. HAYHURST. Stereoscopic ray examination of sandstone quarry workers. *Amer. Jour. Pub. Health*, 17, 818-22 (1927).
- R. B. LADOO. Non-Metallic Minerals: Occurrence, Preparation, Utilization. McGraw-Hill Book Co., N. Y., 1925.
- F. H. LABRY. Oesophageal diverticula. *Boston Med. & Surg. Jour.*, 138, 355-61 (1923).
- H. R. M. LANDIS. Case of silicosis. Do Document 6819. Filed 05/04/19. Page 9 of 10. *Jour. Ind. Hyg.*, 7, 1-5 (1925).
- F. LANGGUTH. Über die Siderosis Pulmonum. *Deut. Arch. klin. Med.*, 55, 255 (1895). (Quoted by Bohrod.)
- A. J. LANZA. Personal communication.
- A. J. LANZA AND S. B. CHILDS. Roentgen-ray findings in miners' consumption, based on a study of 150 cases. U. S. Pub. Health *Bull.*, No. 85 (Jan., 1917).
- K. M. LYNCH AND W. A. SMITH. Asbestosis bodies in sputum and lung. *Jour. Amer. Med. Assn.*, 95, 659-61 (1930).
- S. McDONALD. Histology of pulmonary asbestosis. *Brit. Med. Jour.*, 2, 1025-26 (1927).
- W. McFARLAND. Silicosis and tuberculosis as seen in granite workers in Barre, Vt. *Jour. Ind. Hyg.*, 9, 315-30 (1927).
- A. MAVROCORDATO. Studies in experimental silicosis and other pneumoconioses. *Pub. S. African Inst. for Med. Research*, No. 15 (March 31, 1922). Contribution to the study of miners' phthisis. *Ibid.*, Dec., 1926.
- E. R. MEREWETHER. Occurrence of pulmonary fibrosis and other pulmonary affections in asbestos workers. *Jour. Ind. Hyg.*, 12, 198-222; 239-57 (1930).
- E. R. MEREWETHER AND C. W. PRICE. Report on effects of asbestos dust on the lungs and dust suppression in the asbestos industry. H. M. Stationery Office, London, 1930.
- E. L. MIDDLETON. Study of pulmonary silicosis. *Jour. Ind. Hyg.*, 2, 433 (1920-1921). Present position of silicosis in industry in Britain. *Brit. Med. Jour.*, 2, 485-89 (1929).
- W. S. MILLER. Essential points in anatomy of lung. *Amer. Jour. Roentgenol.*, 4, 269-79 (1917). Studies on tuberculous infection. III. Lymphatics and lymph flow in human lung. *Amer. Rev. Tuberc.*, 3, 193-209 (1919). Key points in lung structure. *Radiology*, 4, 173-77 (1925).
- Miners' Phthisis Medical Bur.: Rept. for year ended July 31, 1927. Pretoria Printing and Stationery Office, 1928.
- Miners' Phthisis Prevention Committee. Rept., p. 18 (1919).
- P. F. MÖLLER. Radiographic picture in chalicosis, and its differential diagnosis from other affections of the lungs. *Acta radiol.*, 8, 193-208 (1927).
- E. VON MÜLLER. Pneumoconiosis from sandblasting. *Zentr. Gewerbehyg. Unfallverhüt.*, 5, 148-50 (1929); abstracted in *Bull. Hyg.*, 31, 953-54 (1928).
- M. MURRAY. Charing Cross Hosp. Gaz., 1900. (Referred to by Cooke.)
- B. S. NICHOLSON. Dusted lung, with special reference to inhalation of silica dust (SiO_2) and its relation to pulmonary tuberculosis. *Jour. Ind. Hyg.*, 5, 220-42 (1923).
- R. C. OHMAN. Contribution to knowledge of roentgenological appearance of silicosis. *Acta radiol.*, 9, 266-88 (1928).
- T. OLIVER. Pulmonary asbestosis; a sociomedical study. *Arch. Gewerbepathol. Gewerbehyg.*, 1, 67-76 (1930). Pulmonary asbestosis in its clinical aspects. *Jour. Ind. Hyg.*, 9, 483-85 (1927). Clinical aspects of pulmonary asbestosis. *Brit. Med. Jour.*, 2, 1026-27 (1927).
- C. R. ORR. Discussion on A. E. Russell. *Jour. Amer. Med. Assn.*, 95, 1714 (1930).
- H. K. PANCOAST AND E. P. PENDERGRASS. Review of present knowledge of pneumoconiosis, based upon roentgenologic studies, with notes on the pathology of the condition. *Amer. Jour. Roentgenol. & Radium Therapy*, 14, 381-423 (1925). Pneumoconiosis (Silicosis): A Roentgenological Study with Notes on Pathology. Paul B. Hoeber, Inc., New York, 1926.
- H. H. PERMAR. Function of the endothelial cell in pathological conditions, especially in tuberculosis. *Amer. Rev. Tuberc.*, 9, 507-18 (1924).
- Pulmonary asbestosis. *Jour. Amer. Med. Assn.*, 95, 1431 (1930).
- A. R. RIDDELL. Case of silicosis with autopsy. *Can. Med. Assn. Jour.*, 15, 839-41 (1925).
- A. R. RIDDELL AND H. E. ROTHWELL. Clinical and roentgenological study of silicosis. *Jour. Ind. Hyg.*, 10, 147-57 (1928).

A. E. RUSSELL. Personal communication. Dust and pulmonary disease. *Jour. Amer. Med. Assn.*, 95, 1714-17 (1930).

A. E. RUSSELL, R. H. BRITTEN, L. R. THOMPSON, AND J. J. BLOOMFIELD. Health workers in dusty trades. II. Exposure to siliceous dust (granite industry). *U. S. Pub. Health Bull.*, No. 187 (July, 1929).

R. R. SAYERS. *U. S. Bur. Mines Circulars*, Nos. 6089, 196, 6245, 6439. Silicosis among miners. *U. S. Bur. Mines Tech. Paper*, No. 372.

R. R. SAYERS AND F. V. MERIWETHER. Miliary lung disease due to unknown cause. *Pub. Health Rept.*, 45, 994-3009 (1930).

A. SCHLOSSMANN. Anthracosis and tuberculosis. *Klin. Wochschr.*, 5, 1786-87 (1926); abstracted in *Jour. Amer. Med. Assn.*, 87, 1935 (1926).

H. E. SEILER. Case of pneumoconiosis; result of inhalation of asbestos dust. *Brit. Med. Jour.*, 2, 982 (1928).

F. W. SIMSON. Pulmonary asbestosis in S. Africa. *Brit. Med. Jour.*, 1, 885-87 (1928).

A. R. SMITH. Silicosis among the rock drillers, blasters, and excavators in New York City. *Jour. Ind. Hyg.*, 11, 9-69 (1929). Personal communication.

W. S. SMITH AND E. L. COLLIS. Report on manufacture of silica brick. H. M. Stationery Office, 1917. Quoted by Heffernan.)

H. F. SMYTH AND H. F. SMYTH, JR. Spray painting hazards as determined by the Pennsylvania and the National Safety Council surveys. *Jour. Ind. Hyg.*, 10, 63-214 (1928).

W. B. SOPER. Pulmonary asbestosis; report of a case and a review. *Amer. Rev. Tuberc.*, 22, 571-84 (1930).

South African Silicosis Act, experiences in administration of. *Ind. Doctor*, 2, 124 (1925).

J. V. SPARKS. Personal communication.

Spray painting in Pennsylvania. Dept. Labor and Industry, Commonwealth of Pennsylvania, Harrisburg. *Special Bull.*, No. 16 (1926).

M. J. STEWART AND A. C. HADDOW. Demonstration of the peculiar bodies of pulmonary asbestosis ("asbestos bodies") in material obtained by lung puncture and in the sputum. *Jour. Path. Bact.*, 32, 172 (1929). The immediate diagnosis of pulmonary asbestosis at necropsy. *Brit. Med. Jour.*, 2, 509 (1928).

C. L. SUTHERLAND AND S. BRYSON. Occurrence of disease of the lungs from dust inhalation in the slate industry in the Gwynn District. H. M. Stationery Office, 1930. Abstracted in *Jour. Ind. Hyg.*, 12, 199 (1930).

N. TATTERSALL. Occurrence and clinical manifestations of silicosis among hard ground workers in coal mines. *Jour. Ind. Hyg.*, 8, 466-50 (1926).

L. R. THOMPSON AND R. H. BRITTEN. Silica dust hazard in granite cutting industry. *Ibid.*, 12, 123-47 (1930).

L. R. THOMPSON AND D. K. BRUNDAGE. Study of exposure to calcium dusts generated in the manufacture of Portland cement. *Ibid.*, 11, 182-93 (1929). Respiratory diseases in a Portland cement plant. *Ibid.*, 11, 266-77 (1929).

L. R. THOMPSON, D. K. BRUNDAGE, A. E. RUSSELL, AND J. J. BLOOMFIELD. Health of workers in a Portland cement plant. *U. S. Pub. Health Bull.*, No. 176 (April, 1928).

J. M. WAINWRIGHT AND H. J. NICHOLS. Relation between anthracosis and pulmonary tuberculosis. *Amer. Jour. Med. Sci.*, 130, 386-99 (1905).

W. WATKINS-PITCHFORD. Silicosis of S. African gold mines, and changes produced in it by legislative and administrative efforts. *Jour. Ind. Hyg.*, 19, 109-39 (1927). Diagnosis of silicosis. *Med. Jour. Australia*, 2, 382-84 (1923).

A. H. WATT, L. G. IRVINE, J. P. JOHNSON, AND W. STEWART. Silicosis (Miners' Phthisis) in the Witwatersrand. Miners' Phthisis Prevention Comm. of S. Africa, Pretoria, Appendix No. 6, 1916.

T. WEDEKIND. Anthracosis and pulmonary tuberculosis. *Klin. Wochschr.*, 7, 890-95 (1928); abstracted in *Jour. Amer. Med. Assn.*, 91, 214 (1928).

H. S. WILLIS. Pulmonary effect of over three years' exposure of guinea pigs to silica dust. *Amer. Rev. Tuberc.*, 17, 253-67 (1928). Pneumoconiosis and tuberculosis. *Medicine*, 9, 413-506 (1930).

C.-E. A. WINSLOW AND L. GREENBURG. Study of dust hazard in wet and dry grinding shops of an ax factory. *Pub. Health Rept.*, Oct. 8, 1920. (Quoted by Russell, Britten, Thompson, and Bloomfield.)

W. B. WOOD. Pulmonary asbestosis; radiographic appearances in skiagrams of the chests of workers in asbestos. *Tubercle*, 10, 353-63 (1929).

W. B. WOOD AND S. R. GLOYNE. Pulmonary asbestosis. *Lancet*, 1, 445-48 (1930).

W. B. WOOD AND D. S. PAGE. Case of pulmonary asbestosis. *Tubercle*, 10, 457-60 (1929).

Workmen's Compensation Act, Ontario, with Amendments to 1928, Toronto, 1928.

CERAMIC SCHOOL NOTES

NEW YORK STATE COLLEGE OF CERAMICS AT ALFRED UNIVERSITY

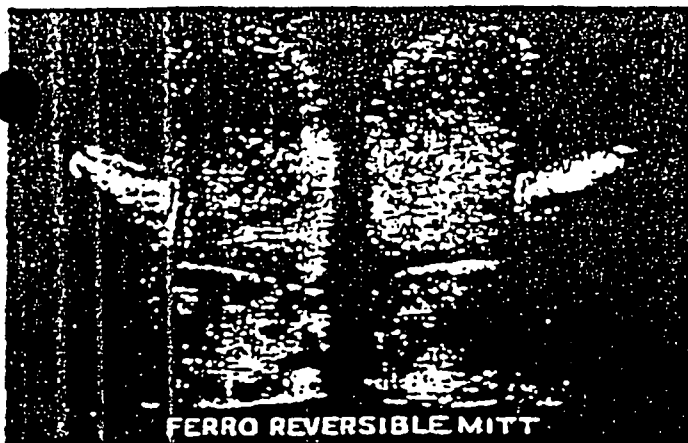
Dedication Exercises for the New Ceramic Building, at Alfred, New York, June 12, 1933

Introductory Remarks by Dean Major E. Holmes

I should like to call attention to the background of these dedication ceremonies which our friends have made possible for us to arrange for today.

The New York State College of Ceramics, recently elevated to that status from the status of a school, is the only institution in New York devoted to higher education in ceramics. For the current year its enrollment is 247.

this figure representing a 40% increase over that of the preceding year. There is a staff of twelve instructors, each a specialist in his line of work. The College is organized on the basis of three departments, that of General Technology and Engineering, Glass Technology, and Ceramic Art. The courses of study embrace all fields of the ceramic industries in their three essential aspects of technology, engineering, and art. The school now consists of three buildings including the new one to be dedicated today, and affords 40,000 square feet of floor space devoted to lecture rooms and laboratories. New, up-to-date equipment worth \$40,000 has been installed in this new building during the past year and \$15,000 worth will be installed in the coming year. This large expansion program of the past year has more



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 Gillinder Bros., Inc., Port Jervis, N. Y. (James Gillinder)
 Gladding, McBean & Co., 660 Market St., San Francisco, Calif. (Atholl McBean)
 Gleason-Tiebout Glass Co., 59 54th St., Maspeth, N. Y. (C. H. Tiebout)
 Glenwood Range Co., Taunton, Mass. (J. L. Anthony)
 Golding-Keene Co., Keene, N. H. (C. E. Golding)
 Golding Sons Co., Trenton Trust Bldg., Trenton, N. J. (H. P. Margerum)
 Great Lakes Steel Corp., Tecumseh Rd., Encourse, Detroit, Mich. (C. W. Given)
 Green Fire Brick Co., A. P., Mexico, Mo. (A. P. Green)
 Haeger Potteries, Inc., Dundee, Ill. (E. H. Haeger)
 Hall China Co., East Liverpool, Ohio (M. W. Thompson)
 Hanovia Chemical & Mfg. Co., Chestnut St. & N. J. R.R. Ave., Newark, N. J. (W. Riehl)
 Hardinge Co., Inc., York, Pa. (F. E. Finch)
 Harshaw Chemical Co., Intelligence Service Div., Cleveland, Ohio (D. G. Pierce)
 Hartford-Empire Co., Hartford, Conn. (F. G. Smith)
 Hazel-Atlas Glass Co., Wheeling, W. Va. (J. H. McNash)
 Hommel Co., O., 209 Fourth Ave., Pittsburgh, Pa. (O. Hommel)
 Houze Convex Glass Co., L. J., Point Marion, Pa. (R. J. Houze)
 Hydraulic-Press Brick Co., 705 Olive St., St. Louis, Mo. (S. H. Ivery)
 Industrial Publications, Inc., 59 E. Van Buren St., Chicago, Ill. (F. A. Guignon)
 International Lead Refining Co. (Anaconda Zinc Oxide Dept.), 151st St. & McCook Ave., East Chicago, Ind. (F. O. Case)
 Kentucky-Tennessee Clay Co., Paris, Tenn. (R. C. Mecker)
 Knowles China Co., Edwin M., Newell, W. Va. (J. W. Hepplewhite)
 Kohler Company, Kohler, Wis. (C. J. Kohler)
 Koppers Research Corp., 1628 Koppers Bldg., Pittsburgh, Pa. (O. O. Malleis)
 Laclede-Christy Clay Products Co., 1711 Ambassador Bldg., St. Louis, Mo. (W. J. Westphalen)
 Lapp Insulator Co., Inc., Leroy, N. Y. (G. W. Lapp)
 Laughlin China Co., Homer, East Liverpool, Ohio (Joseph Wells)
 Lee Clay Products Co., Clearfield, Ky. (M. S. Bowne)
 Libbey Glass Mfg. Co., W. & L. E. R.R. and Ash Sts., Toledo, Ohio (H. R. Black)
 Lindemann & Hoverson Co., A. J., Milwaukee, Wis. (W. C. Lindemann)
 Locke Insulator Corp., Box A, Baltimore, Md. (F. H. Reagan)
 London Brick Co. & Forders, Ltd., Africa House, Kingsway, London, W. C. 2, England (C. W. D. Rowe)
 Ludowici-Celadon Co., 104 S. Michigan Ave., Chicago Ill. (H. F. Beyer)
 McLain Fire Brick Co., Wellsville, Ohio (J. B. Blewett)
 Macbeth-Evans Glass Co., Charleroi, Pa. (H. H. Blau)
 Mansfield Vitreous Enameling Co., Mansfield, Ohio (D. S. Beal)
 Maryland Glass Corp., Morrell Park Sta., Baltimore, Md. (L. C. Roche)
 Matawan Tile Co., Matawan, N. J. (B. K. Eskesen)

* Names of voters are in parentheses

Corporation Members (Continued)

Metal & Thermit Corp., 120 Broadway, New York, N. Y. (Eugen Becher)
 Mississippi Glass Co., 220 Fifth Ave., New York, N. Y. (R. D. Humphreys)
 Moffats, Ltd., Weston, Ontario, Canada (F. W. Moffat)
 Moore & Munger Co., 33 Rector St., New York, N. Y. (Murray Rushmore)
 Mosaic Tile Co., Zanesville, Ohio (R. P. Herrold)
 Mt. Clemens Pottery Co., Mt. Clemens, Mich. (C. E. Doll)
 National Aluminate Corp., 6216 W. 66th Place, Chicago, Ill. (G. J. Fink)
 New Castle Refractories Co., New Castle, Pa. (R. W. Rowland)
 New Jersey Porcelain Co., New York Ave. & Plum St., Trenton, N. J. (Stephen Wenczel)
 Nippon Gaiishi Kabushiki Kwaisha, Atsuta Minamiku, Nagoya, Japan (M. Ezoye)
 Nippon Toki Kwaisha, Ltd., Noritake, Nagoya, Japan (Jiro Ishikawa)
 North American Refractories Co., National City Bank Bldg., Cleveland, Ohio (E. M. Weinfurter)
 North State Feldspar Corp., Micahville, N. C. (W. F. Deneen)
 Northwestern Terra Cotta Co., 4417 Oleatha St., St. Louis, Mo. (B. Purcell)
 Norton Company, Worcester, Mass. (A. T. Malm)
 Oberly Brick Co., Wilmington, Del. (H. H. Oberly)
 Ohio Insulator Co., Barberton, Ohio (M. W. Manz)
 Onondaga Pottery Co., Syracuse, N. Y. (B. E. Salisbury)
 Owens-Illinois Glass Co., Alton, Ill. (F. T. Nesbitt)
 Owens-Illinois Pacific Coast Co., 15th & Folsom Sts., San Francisco, Calif. (Otto Rosenstein)
 Pacific Clay Products Co., 650 Chamber of Commerce Bldg., Los Angeles, Calif. (Robert Linton)
 Paper Makers Importing Co., Inc., Easton, Pa. (Charles Brian)
 Pyralis & Seymour, Inc., Solvay, N. Y. (J. W. Brooks)
 Pennsylvania Pulverizing Co., Lewistown, Pa. (W. J. Woods)
 Pennsylvania Salt Mfg. Co., 641 Union Trust Bldg., Pittsburgh, Pa. (J. E. Hutchinson)
 Pfaudler Co., Rochester, N. Y. (O. I. Chormann)
 Pittsburgh Plate Glass Co., Creighton, Pa. (C. E. Fulton)
 Polar Ware Co., Sheboygan, Wis. (W. J. Vollrath)
 Porcelain Enamel & Mfg. Co., Eastern & Pemco Aves., Baltimore, Md. (Karl Türk)
 Potters Supply Co., East Liverpool, Ohio (D. C. Irwin)
 Republic Steel Corp., Youngstown, Ohio (L. D. Mercer)
 Rickmann, Dr. & Rappe, G. m. b. H., Chemische Fabriken, Köln-Kalk, Germany (E. Rickmann)
 Riddell Co., W. A., Bucyrus, Ohio (W. A. Riddell)
 Roberts & Mander Stove Co., Hatboro, Pa. (R. B. Schaal)
 Roessler & Hasslacher Chemical Co., Empire State Bldg., New York, N. Y. (T. H. McKeown)
 Roseville Pottery Co., Zanesville, Ohio (Mrs. George Young)
 Ross-Tacony Crucible Co., Tacony, Philadelphia, Pa. (K. E. Buck)
 Rundle Mfg. Co., Milwaukee, Wis. (A. C. Held)
 Salem China Co., Salem, Ohio
 Sebring Pottery Co., Sebring, Ohio (C. L. Sebring)
 Shenango Pottery Co., New Castle, Pa. (J. M. Smith)
 Simonds Worden White Co., Dayton, Ohio (F. R. Henry)
 Simplex Engineering Co., Washington, Pa. (C. E. Frazier)
 Smith & Stone, Ltd., Georgetown, Ontario, Canada (B. Stone)
 Southern California Gas Co., 1700 Sante Fe Ave., Los Angeles, Calif. (Lee Holtz)
 Spinks Clay Co., H. C., Newport, Ky. (R. B. Carothers)
 Square D Company, 6060 Rivard St., Detroit, Mich. (H. S. Freeman)
 Standard Pyrometric Cone Co., 1445 Summit St., Columbus, Ohio (H. B. Henderson)
 Standard Sanitary Mfg. Co., 1541 S. 7th St., Louisville, Ky. (Erwin Sohn)
 Star Porcelain Co., Muirhead Ave., Trenton, N. J. (F. F. Gardinor)
 Stark Brick Co., Canton, Ohio (E. A. Stewart)
 Stettiner Chamottefabrik Akt.-Ges., Westfälische Str., 90, Berlin-Wilmersdorf, Germany
 Swindell-Dressler Corp., P. O. Box 1733, Pittsburgh, Pa. (Philip Dressler)
 Taylor, Smith & Taylor Co., Chester, W. Va. (W. L. Smith, Jr.)
 Titanium Alloy Mfg. Co., Niagara Falls, N. Y. (R. S. Tabor)
 Toyo Toki Kwaisha, Shinozaki, Kokura City, Japan (S. Momoki)
 Trenton Potteries, Trenton, N. J. (J. A. Campbell)
 Tyler Co., W. S., Cleveland, Ohio (F. P. Nickerson)
 United Clay Mines Corp., Oakland & Prospect Sts., Trenton, N. J. (K. E. Ward)
 Universal Clay Products Co., Sandusky, Ohio
 Universal Dental Co., 48th & Brown St., Philadelphia, Pa. (Joseph Kohn)
 Universal Sanitary Mfg. Co., New Castle, Pa. (W. Keith McAfee)
 Verreries Souchon Neuvesel, Siege Social, a Lyon 8, 10 rue de la Bourse, France
 Vesuvius Crucible Co., Swissvale, Pa. (F. L. Arensberg)
 Vitreous Enameling Co., 71st St. & Grant Ave., Cleveland, Ohio (E. H. Weil)
 Vitro Manufacturing Co., Corliss Sta., Pittsburgh, Pa. (Josef Vollkommer)
 Vollrath Co., Sheboygan, Wis. (J. C. Vollrath)
 Waltham Grinding Wheel Co., Waltham, Mass. (M. F. Cunningham)
 Washington Porcelain Co., Washington, N. J. (C. J. Rukenbrodt)
 Weber Electric Co., Schenectady, N. Y. (August Weber, Jr.)
 Western Brick Co., Danville, Ill. (F. M. Butterworth)
 Western Electric Co., Hawthorne Sta., Chicago, Ill. (W. G. Altepeter)
 West Gas Improvement Co., 441 Lexington Ave., New York, N. Y. (S. J. Beale)
 Westinghouse Electric & Mfg. Co., Derry, Pa. (E. H. Fritz)
 Westinghouse Lamp Co., Bloomfield, N. J.
 Wheeling Steel Corp., Portsmouth Works, Portsmouth, Ohio (T. W. Jenkins)
 Whitall-Tatum Co., Millville, N. J. (G. S. Bacon)

1934 Annual Meeting
 AMERICAN CERAMIC SOCIETY
 Hotel Netherland Plaza

Cincinnati, Week of February Eleven